

IN THE CLAIMS

Please amend claims 1-5, 7-12 and 14 as follows:

1 1. (Currently Amended) A radio communication system having a
2 communication channel comprising a plurality of paths between first
3 and second terminals each having a plurality of antennas, wherein
4 the first terminal comprises ~~receiving means having direction~~
5 ~~determining means for determining a receiver configured to~~
6 determine a plurality of directions from which signals arrive from
7 the second terminal, ~~means for receiving a plurality of respective~~
8 ~~signals from some or all of the plurality of directions, means for~~
9 ~~extracting a plurality of sub-streams from the received signals and~~
10 ~~means for combining the plurality of sub-streams to provide an~~
11 ~~output data stream, and the first terminal further comprises~~
12 ~~transmitting means having means for separating and a transmitter~~
13 configured to separate a signal for transmission into a plurality
14 of sub-streams, ~~and transmitting means for transmitting each sub-~~
15 stream into a respective one of the plurality of directions
16 determined by the ~~receiving means~~ receiver, wherein the

17 | ~~transmitting means~~ transmitter includes a controller ~~means for~~
18 | ~~operating the plurality of antennas as an array and operable to~~
19 | ~~adapt the antenna pattern for each sub-stream such that a peak in~~
20 | ~~the antenna pattern corresponds to the respective direction~~
21 | configured to independently adjust the power and/or bitrate of each
22 | sub-stream depending on a signal quality parameter of the sub-
23 | stream.

1 2. (Currently Amended) A system as claimed in claim 1, wherein
2 | the ~~receiving means~~ receiver further comprises means for
3 | determining an angular power distribution of incoming signals.

1 3. (Currently Amended) A system as claimed in claim 2, wherein
2 | the ~~direction determining means~~ receiver further comprises means
3 | for selecting from the plurality of directions those directions
4 | from which the strongest signals arrive from the second terminal.

1 4. (Currently Amended) A terminal for use in a radio
2 | communication system having a communication channel comprising a

3 plurality of paths between the terminal and another terminal,
4 ~~wherein receiving means are provided having direction determining~~
5 ~~means for determining a plurality of directions from which signals~~
6 ~~arrive from the other terminal, and transmitting means are provided~~
7 having means for separating a signal for transmission into a
8 plurality of sub-streams, ~~and the~~ transmitting means being
9 configured for transmitting each sub-stream into a respective one
10 of the plurality of directions ~~determined by the receiving means,~~
11 wherein the transmitting means includes control means for ~~operating~~
12 ~~a plurality of antennas as an array and operable to adapt the~~
13 ~~antenna pattern for each sub-stream such that a peak in the antenna~~
14 ~~pattern corresponds to the respective direction~~ independently
15 adjusting the power and/or bitrate of each sub-stream depending on
16 a signal quality parameter of the sub-stream.

1 5. (Currently Amended) A terminal as claimed in claim
2 ~~4, wherein the receiving means further comprises~~ comprising means
3 for receiving a plurality of respective signals from some or all of
4 the plurality of directions, means for extracting a plurality of

5 | sub-streams from the received signals, and means for combining the
6 | plurality of sub-streams to provide an output data stream.

1 6. (Previously Presented) A terminal as claimed in claim 5,
2 wherein the numbers of transmitted and received sub-streams are not
3 equal.

1 7. (Currently Amended) A terminal as claimed in claim 4,
2 | ~~wherein the receiving means further comprises~~ comprising means for
3 | determining an angular power distribution of incoming signals.

1 8. (Currently Amended) A terminal as claimed in claim 7,
2 | ~~wherein the direction determining means further comprises~~
3 | comprising means for selecting from the plurality of directions
4 | those directions from which the strongest signals arrive from the
5 | second terminal.

1 9. (Currently Amended) A terminal as claimed in claim 4,
2 | wherein the control means are configured for operating the
3 | plurality of antennas as an array and for ~~further adapting~~ the

4 antenna pattern for each sub-stream such that a peak in the antenna
5 pattern corresponds to the respective direction and nulls in the
6 antenna pattern correspond to the directions in which other sub-
7 streams are transmitted.

1 10. (Currently Amended) A terminal for use in a radio
2 communication system having a communication channel comprising a
3 plurality of paths between the terminal and another terminal,
4 wherein receiving means are provided having direction determining
5 means for determining a plurality of directions from which signals
6 arrive from the other terminal, and transmitting means are provided
7 having means for separating a signal for transmission into a
8 plurality of sub-streams, ~~and the~~ transmitting means being
9 configured for transmitting each sub-stream into a respective one
10 of the plurality of directions determined by the receiving means,
11 wherein the transmitting means includes control means for
12 independently adjusting the power and/or bitrate of each sub-stream
13 depending on a signal quality parameter of the sub-stream.

1 11. (Currently Amended) A terminal for use in a radio
2 communication system having a communication channel comprising a
3 plurality of paths between the terminal and another terminal, the
4 terminal comprising~~wherein receiving means are provided having~~
5 ~~direction determining means~~ a controller configured for determining
6 a plurality of directions from which received signals arrive from
7 the other terminal, ~~means for receiving a plurality of respective~~
8 ~~signals from some or all of the plurality of directions, means for~~
9 extracting a plurality of sub-streams from the received signals,
10 and ~~means for combining the plurality of sub-streams to provide an~~
11 output data stream, and ~~transmitting means with control means~~ the
12 controller configured being further configured for operating a
13 plurality of antennas as an array, adapting and ~~operable to adapt~~
14 the antenna pattern for each sub-stream such that a peak in the
15 antenna pattern corresponds to the respective direction, and
16 independently adjusting the power and/or bitrate of each sub-stream
17 depending on a signal quality parameter of the sub-stream.

1 12.(Currently Amended) A method of operating a radio
2 communication system having a communication channel comprising a
3 plurality of paths between first and second terminals each having a
4 plurality of antennas, the method comprising the first terminal:
5 ~~determining a plurality of directions from which signals arrive~~
6 ~~from the second terminal, receiving signals from some or all of the~~
7 ~~plurality of directions, extracting a plurality of sub-streams from~~
8 ~~the received signals and combining the plurality of sub-streams to~~
9 ~~provide an output data stream, the method further comprising the~~
10 ~~first terminal~~
11 separating a signal for transmission into a plurality of sub-
12 streams,
13 transmitting each sub-stream into a respective one of the
14 plurality of determined directions, and ~~operating the plurality of~~
15 ~~antennas as an array to adapt the antenna pattern for each sub-~~
16 ~~stream such that a peak in the antenna pattern corresponds to the~~
17 ~~respective direction~~

18 | independently adjusting the power and/or bitrate of each
19 | transmitted sub-stream depending on a signal quality parameter of
20 | the sub-stream.

1 13. (Previously Presented) A method of operating a radio
2 communication system having a communication channel comprising a
3 plurality of paths between first and second terminals each having a
4 plurality of antennas, the method comprising the first terminal:
5 determining a plurality of directions from which signals
6 arrive from the second terminal,
7 receiving signals from some or all of the plurality of
8 directions,
9 extracting a plurality of sub-streams from the received
10 signals,
11 combining the plurality of sub-streams to provide an output
12 data stream,
13 separating a signal for transmission into a plurality of sub-
14 streams,

15 transmitting each sub-stream into a respective one of the
16 plurality of determined directions, and
17 independently adjusting the power and/or bitrate of each
18 transmitted sub-stream depending on a signal quality parameter of
19 the sub-stream.

1 14. (Currently Amended) A radio communication system having a
2 communication channel comprising a plurality of paths between first
3 and second terminals each having a plurality of antennas, wherein
4 the first terminal comprises receiving means having direction
5 determining means for determining a plurality of directions from
6 which signals arrive from the second terminal, means for receiving
7 a plurality of respective signals from some or all of the plurality
8 of directions, means for extracting a plurality of sub-streams from
9 the received signals and means for combining the plurality of sub-
10 streams to provide an output data stream, and the first terminal
11 further comprises transmitting means having means for separating a
12 signal for transmission into a plurality of sub-streams, ~~and the~~
13 transmitting means being configured for transmitting each sub-

14 stream into a respective one of the plurality of directions
15 determined by the receiving means, wherein the transmitting means
16 includes control means for independently adjusting the power and/or
17 bitrate of each sub-stream depending on a signal quality parameter
18 of the sub-stream.

1 15. (Previously Presented) A terminal for use in a radio
2 communication system having a communication channel comprising a
3 plurality of paths between the terminal and another terminal,
4 wherein receiving means are provided having direction determining
5 means for determining a plurality of directions from which signals
6 arrive from the other terminal, means for receiving a plurality of
7 respective signals from some or all of the plurality of directions,
8 means for extracting a plurality of sub-streams from the received
9 signals and means for combining the plurality of sub-streams to
10 provide an output data stream, and transmitting means which
11 includes control means for independently adjusting the power and/or
12 bitrate of each sub-stream depending on a signal quality parameter
13 of the sub-stream.